

---Appendix 1---

**Scope of Work**  
**Administrative Order on Consent for Removal Action**  
**and Settlement Agreement for Past Response Costs**  
**Anaconda Copper Mine, Yerington Nevada**

**SECTION 1.0**      **INTRODUCTION**

This Scope of Work ("SOW") is Appendix 1 to, and incorporated as part of, the Administrative Order on Consent ("Order") CERCLA Docket #09-2009-0010.

This SOW requires the Respondent to: 1) submit and implement a work plan for a removal action at the Evaporation Ponds, 2) submit and implement work plans for additional characterization and for a removal action for radiological materials within the Process Areas, 3) revise the *Interim Operations, Maintenance and Monitoring Plan: Pumpback Well System and Arimetco Heap Leach Water Management*, dated December 30, 2005 ("O&M Plan"), and 4) submit and implement work plans to address Transite Pipe, and Electrical Threat removal actions.

In addition, Respondent shall submit removal action reports for each removal action completed. Generally, all work plans shall include a specific proposed schedule for the associated project, including schedules for fieldwork implementation through the completion of final removal action reports. A deliverables schedule addressing the deliverables and due dates is provided in Table 1. Specific requirements for the work are provided in the following Sections.

**SECTION 2.0**      **ANACONDA EVAPORATION PONDS**

Respondent shall provide and implement a design plan to limit the ponding of low pH, metalliferous water in the lined evaporation ponds to the northwest within the Site to prevent to the extent feasible threats to wildlife as determined by EPA. The design plan also shall include proposed measures to limit the migration of dust containing hazardous substances from the lined and unlined evaporation ponds to the northwest within the Site, and those areas known as the "Thumb Pond" and the "Sulfide Tailings Area" (see Figure 1). The schedule for the plans submissions are set forth in Table 1.

Respondent shall submit a design plan that shall include the use of Vat Leach Tails ("VLT") fill material. Respondent shall also submit an implementation work plan for the construction of a VLT cap to be installed over the lined and unlined evaporation ponds, including enhancing the deteriorated cap at the Thumb Pond and capping the area identified as "Sub-Area A" in Figure 1. The thickness of the VLT cap shall be sufficient to mitigate standing water within the lined evaporation ponds, and to mitigate the generation of fugitive dust from the underlying sediments in the lined, unlined, Thumb Pond and "Sub-Area A" in Figure 1. The average thickness of the VLT cap will be 18 inches. Portions of the VLT cap may be thicker or thinner than 18 inches as appropriate based on engineering and design requirements to meet the stated objectives. Finally, Respondent shall submit a removal action report after completion of the work.

### **SECTION 3.0**

### **ANACONDA PROCESS AREAS RADIOLOGICAL MATERIALS**

Respondent submitted a *Work Plan for the Characterization and Removal of Selected Materials in the Radiological Control Area* on November 3, 2006. EPA did not approve this work plan due to the limited scope proposed in the characterization and removal. From July to November 2007, EPA conducted a radiological assessment in the Process Areas, and completed the *Anaconda Mine Radiation Assessment Letter Report* on August 15, 2008. Based on the results of the report, there are several areas in addition to those proposed for removal by Respondent that may exceed prudently conservative outdoor worker health and safety action levels.

Objectives for a radiological removal action in the Process Areas include:

- protection of current and future Site worker health with respect to radiological materials;
- removal actions for portions of the Process Areas where radiological materials are determined to be above the action level;
- removal of Site perimeter radioactive hazard signs; and
- evaluation of need for new signs in internal site areas.

Respondent shall submit and implement a work plan for additional characterization and response that incorporates the above stated objectives, includes the rationale and methodology to conduct additional characterization and outlines the options for the removal and disposal of areas that exceed the Preliminary Remediation Goals for radionuclides affecting outdoor workers. Subsequent to the additional characterization, the Respondent shall submit a data summary report including the results of the additional characterization, the identification of the specific areas that will be addressed by removal action, the specific removal actions that will be taken, including disposal plans as appropriate. Respondent shall implement the work plan after EPA approval, and submit a removal action report after the completion of the removal work.

### **SECTION 4.0**

### **OPERATION AND MAINTENANCE PLAN**

The O&M Plan is implemented by Respondent pursuant to the Initial Response Activities Unilateral Administrative Order, dated March 31, 2005, CERCLA Docket No. 9-2005-0011 (Initial Response Order). Respondent has conducted water management activities for the Arimetco heap leach fluids management system ("FMS") per the procedures in the O&M Plan. EPA has implemented significant repairs to the FMS from 2006-2008. Respondent shall revise the O&M Plan to address additional maintenance measures to limit significant deterioration of the FMS apart from the ordinary and expected useful life of respective components. These measures will include: assisting EPA, to the extent practical, with emergency measures as deemed necessary by EPA to contain or control fluids within the FMS; maintain all FMS components to prevent reasonably foreseeable deterioration; and, address all routine repairs to liners, trenches, perimeter ditches and other system components, such as pipes, pumps, valves, fittings, and hoses. For the purpose of this SOW, "routine repairs" will include those estimated to cost up to \$25,000

per separate and distinct repair for the FMS, including any repairs needed for evaporative components or other improvements that may be added to the existing FMS. In October of 2008, EPA installed a bird deterrent system for the FMS that requires regular operation and maintenance. These deterrent procedures shall also be incorporated into the revised O&M Plan.

Specifically, the revision of the O&M Plan shall include procedures to:

- maintain and repair pond liners, anchor trenches, and perimeter ditches;
- submit a protocol and for maintaining fluid levels within the Arimetco and EPA 4-acre pond at, or below, designated fluid levels, including construction and maintenance of enhancements to the flow measurement systems;
- evaluate FMS fluid mass balance and provide recommendations for addressing emergency storage capacity;
- submit a protocol for emergency management of fluids within FMS and interconnected Arimetco and EPA 4-acre ponds;
- conduct monthly monitoring of pond fluid levels, pond inflow rates, and pond pumping rates;
- maintain EPA's bird deterrent system at the Arimetco ponds (i.e., ~4 propane cannons), including re-filling of propane canisters, and at the Anaconda Evaporation Ponds according to the *Mitigation Plan for Deterring Birds from Lined Evaporation and Pumpback Ponds*, dated August 15, 2008 and Appendix A, *Yerington/Anaconda Mine Site EPA Bird Deterrent Strategy*, revised December 31, 2008, and as modified in the future by EPA to comply with USFWS requirements (i.e., bird mitigation system may be maintained only on weekdays and as consistent with normal site O&M activities); and
- prepare and implement a sampling and analysis plan to document metals and radiological constituent concentrations in fluids on a semiannual basis.

## **SECTION 5.0**

## **TRANSITE PIPE AND ELECTRICAL THREATS**

Respondent shall submit and implement a work plan or individual work plans for:

- removal and onsite disposition of all transite pipe within the Site; and
- de-energize vestigial electrical systems within the Site, except those presently used or reasonably anticipated to be used to conduct response work within the Site.

Respondent shall submit a removal action report after the completion of the activities above.

## **SECTION 6.0**

## **SCHEDULE FOR DELIVERABLES**

Respondent shall submit the required draft and final deliverables according to the schedule in Table 1.

**Table 1. Deliverables Schedule**

<b>Deliverable</b>	<b>Due Date</b>
Draft Data Summary Report & Design Work Plan for Removal Action at the Evaporation Ponds	Within 45 days of Order Effective Date
Final Data Summary Report & Design Work Plan for Removal Action at the Evaporation Ponds	Within 15 days of EPA comments
Draft Implementation Work Plan for Removal Action at the Evaporation Ponds	Within 45 days of Final Design Plan & Data Summary Report for Removal Action at the Evaporation Ponds approval
Final Implementation Work Plan for Removal Action at the Evaporation Ponds	Within 30 days of EPA comments
Draft Evaporation Ponds Removal Action Report	Within 60 days of completion of removal action
Final Evaporation Ponds Removal Action Report	Within 30 days of EPA comments
Draft Work Plan for Characterization and Remedial Options of Radiological Materials in the Process Areas	Within 60 days of Order Effective Date
Final Work Plan for Characterization and Remedial Options of Radiological Materials in the Process Areas	Within 30 days of EPA comments
Draft Data Summary Report and Identification of Removal Action Areas for Radiological Materials in the Process Areas	Within 60 days of Respondents receipt of validated data
Final Data Summary Report and Identification of Removal Action Areas for Radiological Materials in the Process Areas	Within 30 days of EPA comments
Draft Radiological Removal Action Work Plan for the Process Areas	Within 90 days of approval of Final Data Summary Report and Identification of Removal Action Areas for Radiological Materials in the Process Areas
Final Radiological Removal Action Work Plan for the Process Areas	Within 30 days of EPA comments
Draft Radiological Removal Action Report for the Process Areas	Within 60 days of completion of removal action

Final Radiological Removal Action Report for the Process Areas	Within 30 days of EPA comments
Draft Revision to the <i>Operation and Maintenance Plan Pumpback Well System and Arimetco Heap Leach Water Management System</i> inclusive of the Respondent and EPA bird mitigation programs	Within 45 days of Order Effective Date
Final Revision to the <i>Operation and Maintenance Plan Pumpback Well System and Arimetco Heap Leach Water Management System</i> inclusive of the Respondent and EPA bird mitigation programs.	Within 30 days of EPA comments
Draft Transite PipeAsbestos Work Plan	Within 45 days of Order Effective Date
Final Transite Pipe Work Plan	Within 15 days of EPA comments
Draft Transite Pipe Removal Action Report	Within 60 days of completion of removal action
Final Transite Pipe Removal Action Report	Within 30 days of EPA comments
Draft Electrical Threats Work Plan	Within 45 days of Order Effective Date
Final Electrical Threats Work Plan	Within 15 days of EPA comments
Draft Electrical Threats Removal Action Report	Within 60 days of completion of removal action
Final Electrical Threats Removal Action Report	Within 30 days of EPA comments

Notes: The time required to complete field characterization will be subject to the approved Work Plan Schedules.

